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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHANNON, MICHAEL R

ART UNIT PAPER NUMBER

2614

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/738,099

Applicant(s)

MEDDAUGH ET AL.

Examiner

Michael R. Shannon

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 7-14, filed 18 April 2005, with respect to the rejections of claims 1, 5, and 13 under 35 USC 103(a) over Hamlin in view of Filor; claim 18 under 35 USC 103(a) over Hamlin; claims 2-4 and 14 under 35 USC 103(a) over Hamlin-Filor in view of Lewis; claims 6-9 and 16 under 35 USC 103(a) over Hamlin-Filor in view of Coutinho; claims 10-12 under 35 USC 103(a) over Hamlin-Filor-Coutinho in view of Lewis; and finally, claims 15 and 17 under 35 USC 103(a) over Hamlin-Filor-Lewis in view of Coutinho have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Seeley et al (USP 6,097,429), cited by Examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 13-14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seeley et al (USP 6,097,429), cited by Examiner, in view of Filor et al (USP 5,844,609), cited previously by Examiner.

Regarding claim 1, the claimed "circuit arrangement for providing a video signal to a video display from a selectable subset of a plurality of digital video data carried on a plurality of video data channels, wherein the digital video data is generated from video signals from a plurality of video sources, and each video channel selectably carries either color or monochrome video data" is met as follows:

- The claimed "processor configured and arranged to interpret display commands" is met by the Site Control Unit (SCU) 12, which can be controlled by the operator located remotely to view the images and video signals from the multiple cameras [col. 9, lines 17-40].
- The claimed "selector circuit coupled to the processor and having a plurality of output ports and input ports arranged for connection to the plurality of video data channels, the selector circuit configured and arranged to select digital video data received at a first data rate from a subset of the channels responsive to an input selection signal from the processor and provide selected digital video data at the output ports at a second data rate that is half the first data rate" is met by the video acquisition unit 24 which is present in the SCU 12. The SCU can function to select a camera 22 from which to observe a scene. The SCU and the acquisition unit 24 have multiple inputs (pictured by the multiple cameras 22 at the Customer Premises [Fig. 1] being interfaced to the SCU 12 [col. 9, lines 52-62]) and have multiple outputs in the form of a bus connection in the SCU [Fig. 7]. The bus connection functions to receive multiple

video images obtained from video acquisition unit 24 and MUX 26 and send those video images to the Image Processor 30 and Video processor 38 [Fig. 7]. Also, the fact that the output data rate is half that of the input data rate is met by the inherent operation of a MUX, which takes video in at an adjustable rate and outputs it as a different rate (commonly half that of the input rate, in order to conserve bandwidth on the common bus) [col. 10, lines 44-47]. Also note that according to figure 6, this system could utilize a plurality of SCUs and therefore a plurality of all of the parts of the SCU [col. 9, lines 44-47].

- The claimed "plurality of data routers, each having an output port and an input port coupled to a respective one of the output ports of the selector circuit, and each data router configured and arranged to convert input video data from YCrCb format to RGB format" are met by each of the Video processors 38 in each of the plurality of SCUs (discussed above). Each Video Processor 38 can process the video information received from the image acquisition unit 24 and route it to its corresponding Terminal Adapter 20 via Video Out 46. The fact that the routers are configured to convert the video data from YCrCb format to RGB format is not expressly disclosed by Seeley and will be discussed with regards to Filor below.
- The claimed "video data sequencer coupled to the output ports of the data router, the sequencer configured and arranged to merge the selected video data into frames of video data" is met by the Video Compression 50

and Compressed Video Buffers 51 in the Video Processor 38. Before output, the video processor 38 (meeting the claimed data router) splits the input video into frames for processing and transmission over the ISDN line to the Central Station.

- The claimed "digital-to-analog converter coupled to the video data sequencer, the converter configured and arranged to generate an analog video signal from the frames of video data" is not explicitly met by the Seeley reference. The Seeley reference does, however, teach the ability to process and use digital and analog video within the system [col. 10, lines 1-5]. It is therefore inherent that if the system uses and transmits compressed digital video, that it must then be converted to an analog signal before it is to be output at the workstation 106.

As mentioned above, the Seeley reference does not disclose the YCrCb to RGB format conversion within the data routers (Video Processors 38). Filor et al disclose a system that utilizes a CSC (color space conversion) from YCrCb to RGB for further processing of the video image [col. 14, lines 5-15]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the conversion from YCrCb to RGB into the Video Processor, in order to allow for further processing (as the Video Processor name implies) of the video signal and for more advanced options for customizing and processing the displayed signal because RGB is the most common color space viewed on computer displays and RGB monitors

produce sharper and cleaner images than those produced by composite monitors.

Regarding claim 2, the claimed "apparatus of claim 1, wherein each data router is configurable to compress the input video data at selectable compression level" is met by the fact that the compression (taking place in video compressor 50) is of a required compression requisite [col. 12, line 51]. Also note that the frame rate of the receiving cameras can be controlled and adjusted by the user [col. 10, lines 44-47].

Regarding claim 3, the claimed "apparatus of claim 1, wherein the video data is logically segmented into frames of pixel data, and the data routers are configurable for operation in a first mode or a second mode, wherein a single data router processes video data from a single channel of video data while operating in the first mode, and in the second mode a first data router processes a first half of the pixel data of a frame and a second data router processes a second half of the pixel data of the frame" is not expressly disclosed in the Seeley or Filor references. The first mode is disclosed in the Seeley reference, wherein the single data router (the single Video Processor 38) processes the received video data from a single channel (as previously discussed with reference to rejected claim 1). The second mode, however, is not disclosed. The Examiner takes OFFICIAL NOTICE that it is notoriously well known in the art to apply "parallel processing" (defined as a method of processing in a computer system wherein the task is split evenly among available processors). Parallel Processing can be present in many such computer systems where video processing is utilized, this way the high-intensity video processing does not overburden one processor, and instead is split

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evenly among processors. In this case, the SCU could easily be seen as a parallel server, in which the server utilizes parallel processing in order to improve its performance. Therefore, the Examiner submits that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to utilize parallel processing for processing the video information in the Seeley reference, in order to alleviate some of the burden on one processor in the server and to evenly distribute and segment video information over multiple processes for parallel processing.

Regarding claim 4, the claimed "apparatus of claim 3, wherein each data router is configurable to compress the input video data at selectable compression level" is met by the fact that the compression (taking place in video compressor 50) is of a required compression requisite [col. 12, line 51]. Also note that the frame rate of the receiving cameras can be controlled and adjusted by the user [col. 10, lines 44-47].

Regarding claim 5, the claimed "circuit arrangement of claim 1, wherein the circuit arrangement is supported on a circuit board having connectors arranged for connecting to the video channels" is not explicitly met by the Seeley reference. Nowhere in the reference is it stated that the "circuit arrangement" of the SCU is on a circuit board, though, it is mentioned many times that signals and standard computer chips and software are utilized (as would be the case in any circuit board). However, it can be understood and is therefore submitted as OFFICIAL NOTICE that it is notoriously well known in the art to provide operational units (in this case, the SCU) on circuit boards, for easy addition to existing systems and for easy use when installing and utilizing in a system. Therefore, the Examiner submits that it would have clearly

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obvious to one of ordinary skill in the art at the time of the invention to utilize a circuit board to implement the SCU, in order to implement the functionality of the system on one, complete board to be used in installing a new system or expanding a current system.

Regarding method claim 13, see the above rejection for claim 1.

Regarding claim 14, the claimed "method of claim 13, further comprising compressing the video data at a selectable compression level responsive to the display commands" is met by the fact that the compression (taking place in video compressor 50) is of a required compression requisite [col. 12, line 51]. Also note that the frame rate of the receiving cameras can be controlled and adjusted by the user [col. 10, lines 44-47].

Regarding apparatus claim 18, see the above rejection for claim 1.

4. Claims 6-12 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seeley et al (USP 6,097,429), cited by Examiner, in view of Filor et al (USP 5,844,609), cited previously by Examiner, in further view of Voit et al (USP 5,751,707), cited by Examiner.

Regarding claims 6-9, the Seeley and Filor references meet all of that which is discussed above with regards to claim 1. Neither reference teaches the circuit arrangement having a first memory for storage of graphics data to be overlaid on the video data, the second memory coupled to the sequencer and arranged for storage of the video data, or the pixel selector having input ports coupled to the first memory and

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to the second memory and an output port coupled to the digital-to-analog converter, wherein the pixel selector is configured and arranged to select graphics data from the first memory when graphics data is present. Nor do they teach a third memory for storing priority graphics data as referenced in claim 7, the pixel output controller as discussed in claim 8, or the blink-translation circuit as referenced in claim 9. The Voit reference, however, does teach a way to manipulate different planes of video data (up to 5 different planes with 5 different sections in memory), including overlay data, background data, and video data using a video RAM and an overlay controller [col. 33, line 47 – col. 34, line 9]. The overlay controller combines the planes of data in a prioritized fashion to arrive as the final video signal for display on the display device. The discussion of the overlay information being overlaid on the video data meets the claimed invention of claims 6-9. Therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of the invention to include this overlay functionality into the workstation of Seeley, in order to provide for standard OSD and CC functionality in a more enhanced system. Most standard OSD generators use this type or setup and are very common throughout video display systems.

Regarding claim 10, the claimed “method of claim 6, wherein each data router is configurable to compress the input video data at selectable compression level” is met by the fact that the compression (taking place in video compressor 50) is of a required compression requisite [col. 12, line 51]. Also note that the frame rate of the receiving cameras can be controlled and adjusted by the user [col. 10, lines 44-47].

Regarding claim 11, the claimed "apparatus of claim 6, wherein the video data is logically segmented into frames of pixel data, and the data routers are configurable for operation in a first mode or a second mode, wherein a single data router processes video data from a single channel of video data while operating in the first mode, and in the second mode a first data router processes a first half of the pixel data of a frame and a second data router processes a second half of the pixel data of the frame" is not expressly disclosed in the Seeley or Filor references. The first mode is disclosed in the Seeley reference, wherein the single data router (the single Video Processor 38) processes the received video data from a single channel (as previously discussed with reference to rejected claim 1). The second mode, however, is not disclosed. The Examiner takes OFFICIAL NOTICE that it is notoriously well known in the art to apply "parallel processing" (defined as a method of processing in a computer system wherein the task is split evenly among available processors). Parallel Processing can be present in many such computer systems where video processing is utilized, this way the high-intensity video processing does not overburden one processor, and instead is split evenly among processors. In this case, the SCU could easily be seen as a parallel server, in which the server utilizes parallel processing in order to improve its performance. Therefore, the Examiner submits that it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to utilize parallel processing for processing the video information in the Seeley reference, in order to alleviate some of the burden on one processor in the server and to evenly distribute and segment video information over multiple processes for parallel processing.

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Regarding claim 12, the claimed "apparatus of claim 10, wherein each data router is configurable to compress the input video data at selectable compression level" is met by the fact that the compression (taking place in video compressor 50) is of a required compression requisite [col. 12, line 51]. Also note that the frame rate of the receiving cameras can be controlled and adjusted by the user [col. 10, lines 44-47].

Regarding claim 14-17, see the above rejection to claims 6-9.

Claim Objections

5. Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Perhaps a typographical error is to blame. Claim 12 is currently dependent upon claim 10; however, claim 10 and claim 12 recite the same limitation. Perhaps claim 12 is meant to be dependent upon claim 11.

6. Claims 2-4 are objected to because of the following informalities: The claims recite "The apparatus of claim 1" and "The apparatus of claim 3", respectively. This seems to be an error and is assumed to read "The circuit arrangement of claim 1" and "The circuit arrangement of claim 3", respectively. Appropriate correction is required.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael R. Shannon who can be reached at **(571) 272-7356** or **Michael.Shannon@uspto.gov**. The examiner can normally be reached by phone Monday through Friday 8:00 AM – 5:00PM, with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at (571) 272-7353.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is **(571) 272-2600**.

Michael R Shannon
Examiner
Art Unit 2614

Michael R Shannon
July 14, 2005


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600